

BUR920010040US2

AMENDMENTS TO THE CLAIMS

IN THE CLAIMS:

1.-12. (Cancelled)

13. (Currently Amended) A thin film insulating (FIN) metal oxide semiconductor field effect transistor (MOSFET) comprising:

a bottom Si-containing layer;

an insulating region present atop said bottom Si-containing layer, said insulating region having at least one partial opening therein:

a gate region formed in said partial opening, said gate region comprising two regions of gate conductor that are separated from vertical channel regions by an insulating film, said insulating film comprising a gate dielectric and having opposite vertical surfaces adjacent to the vertical channel regions;

source/drain diffusion regions abutting said gate region, said source/drain diffusion regions having junctions that are self-aligned to the vertical channel regions and the gate region; and

insulating spacers in said partial opening that separate the gate region and the source/drain diffusion regions formed orthogonal to said insulating film; and

BUR920010040US2

wherein said gate region is between said insulating spacers; and
to thereby provide wherein said MOSFET is a double-gated/double
channel MOSFET device, in which the gate region is self-aligned to the
source/drain diffusion regions and vertical channel regions.

14. (Original) The FIN MOSFET of Claim 13 wherein said insulating region includes an insulating layer of an SOI material.

15. (Original) The FIN MOSFET of Claim 13 wherein said partial opening exposes a portion of said insulating layer of said SOI material.

16. (Previously Amended) The FIN MOSFET of Claim 13 wherein said insulating film is formed surrounding a portion of a Si-containing layer.

17. (Original) The FIN MOSFET of Claim 16 wherein said gate dielectric is comprised of an oxide, a nitride, an oxynitride or any combination or multilayer thereof.

BUR920010040US2

18. (Original) The FIN MOSFET of Claim 13 wherein said regions of gate conductor are each comprised of polysilicon, amorphous Si, a conductive elemental metal, an alloy of a conductive elemental metal, a nitride or silicide of a conductive elemental metal or multilayers thercof.

19. (Original) The FIN MOSFET of Claim 13 further comprising salicide regions formed atop said source/drain diffusion regions.

20. (Original) The FIN MOSFET of Claim 13 wherein said source/drain diffusion regions are formed in a portion of a patterned Si-containing layer.